Claims

1. Method for the determination of the free fraction of a substance comprising

   (a) incubation of the substance with a suspension of particles, other than erythrocytes, having a lipophilic surface, in a substantially protein-free aqueous medium, for the determination of the distribution of the substance between the particles and said substantially protein free medium;

   (b) incubation of the substance with a suspension of particles, other than erythrocytes, having a lipophilic surface, in a protein-containing aqueous medium, for the determination of the distribution of the substance between the particles and said protein-containing aqueous medium; and

   (c) determination of the free fraction of the substance from the distributions determined under (a) and (b).

2. Method of claim 1, wherein said suspension of particles is selected from a group of suspensions comprising

   (a) a suspension of particles having a solid core;

   (b) a suspension of particles having a solid core comprising a silica bead; and

   (c) a suspension of Transil$^{(R)}$ particles.

3. Method of claim 1 or 2, wherein the protein-containing aqueous medium is plasma.

4. Method of any of claims 1 to 3, wherein the substantially protein-free aqueous medium is a buffer solution.

5. Method of any of claims 1 to 4, wherein said incubations of said substance with said suspensions of particles is on a plate having multiple cavities or on a 96-well-plate.

6. Method of any of claims 1 to 5, wherein the solid core is a ferromagnetic solid core.

7. Method for the determination of the relative free fraction of a substance in a first species in relation to the free fraction of the same substance in a second species comprising

   (a) determining the membrane affinity in plasma (MA_{plasma}) of said substance for said first species,

(b) determining the membrane affinity in plasma (MA_{plasma}) of said substance for said second species,

(c) determining the relative free fraction from the results determined under steps (a) and (b).

8. A kit for use in any of the methods of claims 1 to 7, comprising a plate having multiple cavities, a buffer solution, plasma, and particles selected from a group of particles comprising

(a) particles having a solid core;

(b) particles having a solid core which is a silica bead; and

(c) Transil$^{(R)}$ particles.

9. The kit of claim 8, comprising plasma of two different species.

10. A kit of claim 8 or 9, wherein specific amounts of particles are placed within said cavities of said plate.